# THE AMERICAN ARCHITECT AND BUILDING NEWS.

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THE Committee on Foreign Relations has decided, says The Philadelphia Press, against the treaty for the establishment of an International Bureau of Weights and Measures, of which we have before spoken (No. 13, March 25). The committee are not opposed in theory to an international system, but reject the treaty because the people of the country are not educated up to it. They argue, if we may trust the report, that the nations of the Old World, though they have long discussed the unification of weights and measures, have never accepted it, nor even considered it seriously with a view to its practical introduction. Who are here meant by the nations of the Old World, it is hard to judge, — unless it be Great Britain, — when we consider that Germany, France, Italy, the Netherlands, and Switzerland, use only the metric system, and that Russia and almost all the other European powers have united in framing the international treaty. As we understand the treaty, moreover, it does not bind any of its signataries to the adoption of any new system, but only to the common support of a bureau which is to establish exact ratios between the systems now in use, and provide accurate standards of the metric and all the other units in use; of course with a view to the ultimate introduction of a common system, but with no obligation to it.

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PENDING the examination of the ventilation of the Representatives' Hall in the Capitol at Washington, which is in the hands of a committee including Gen. Humphreys, Prof. Henry, Dr. Billings, and, we believe, some others, Mr. Benjamin Severson, civil engineer, has submitted a report on the subject, in which he ascribes the bad condition of the air in the hall to several causes, of which these are mentioned as most active: the impurity of the air when it is introduced, the upward ventilation, and the insufficient means adopted for removing the vitiated air. No doubt the first of these causes is very active, since he points out that the air-ducts, through which the air is introduced by fans, open at points where they must receive air tainted by urinals, musty vaults and unventilated cellars, and even from sewers. In regard to the second point, the upward ventilation, he repeats an error which we had supposed to be laid on the shelf before this, though it was prominent in the discussions of the same question a dozen years ago. He quotes the testimony of Prof. Wetherill, given in 1865, that carbonic acid gas was found to be very uniformly diffused through the whole air from floor to ceiling, and adds, "This unusual and manifest diffusion of carbonic acid gas is but a natural effect of the bad system of upward ventilation," saying that in ordinary cases the carbonic acid sinks to the floor below the plane of inhalation. It is quite true that carbonic acid is heavy enough to be poured like water into a receiver, and extinguish a candle placed in the bottom of it: yet if, after half filling a jar with the carbonic acid, we were to cover it up, and leave it undisturbed, it would be found in a short time to have entirely and uniformly mixed with the air shut up with it. The fact is, that the diffusion of the carbonic acid is not unusual, but the only natural condition, and one that could not be avoided except by removing the gas with great rapidity. The tendency of all gases in juxtaposition to interpenetrate by virtue of their individual tensions, and form by diffusion a perfectly homogeneous mixture, is one of the commonplaces of physics, and should not be forgotten by any one who assumes to treat of ventilation. That upward ventilation, especially from registers in floors, is likely to be unwholesome, is evident for the other reason that particles of solid matter in suspension should be allowed or helped to settle, instead of being carried about by an ascending current; and that floor registers are sure in such a hall to be receptacles for much unclean matter through which the air that they supply must filter. It would be matter for congratulation if such registers — for the *supply* of air — could be banished even from private houses, where they are at least always receiving and distributing dust, besides offering continual temptations to occupants to stand over them, and impregnate the air of their homes with the exhalations of boots and clothing.

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MR. SEVERSON'S suggestions for remedying the trouble are to the point; what alternatives may be offered remains to be seen. He proposes to build a large air-duct of masonry, cemented within, to a point far enough from the building to avoid contaminated air, and open it into the base of a vertical shaft, high enough to open above the reach of ordinary dust, and covered with a wire strainer. Perforated pipes are to fill both the shaft and the duct with water, either hot or cold, in the form of fine spray, which, condensing, is to be drained off at the bottom. The outer air received through the shaft, and passing through the duct, would be tempered, hydrated, and cleansed before its delivery into the hall. This contrivance, he claims, could be applied with little delay and moderate cost, without interrupting the use of the hall, and would be equally serviceable for the present system, or for a downward ventilation, if that should be substituted. Another point to which Mr. Severson directs his attention is the sewerage of the Capitol. The Tiber, a sluggish brook which used to crawl in open sight through the lower part of the city, was culverted by the Board of Works, and made into a sewer. Since it has almost no declivity, and therefore almost no motion, and is unventilated, it is likely to become, and probably is now, a dangerous neighbor. Into this, it appears, the Capitol is drained; and Mr. Severson proposes the ventilation of it and of the drains of the building, as part of his scheme.

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THE most offensive manifestation of trades-unionism that we have heard of for a long time is that of the derrick-men of New York, referred to in the letter of our correspondent in another column. It appears from an account which we find in the New York World that a number of laborers have, by means of a close trades-union, succeeded in getting almost exclusively into their own hands the handling of the stone-setters' derricks. Their small number — some two hundred being sufficient for all the work that has to be done in the city in these dull days — enables them to form a compact association which exercises a most oppressive and almost ridiculous tyranny over the master stone-setters, and to enact a rigid code for the management of their work. The men must have two dollars and a half for a day's work of eight hours at the derrick, even though the stone-cutter or setter gets no more. They are not to hoist more than one stone at a time, however small it be, — a rule which

reminds one of the restriction which forbids the British bricklayer to work with both hands; and they must not raise more than a given number of stones in a day. No one who is not one of them is allowed to so much as lay a hand to a crank or a rope, even in an emergency. There is record of a gang which struck work on the instant, because an employer took hold of a crank; and a block of carved stone must be broken by dragging it up against the face of a building, rather than allow a stone-setter to hold a guide-rope.

Naturally, the master stone-setters have formed an association to resist such oppressions; but thus far with no great success, it would appear. Attempts to get the work done by more manageable men are met, of course, by the usual intimidation of the outside laborers, and with more than the usual success; but this is not enough. For months a regular system of destroying the employers' property has been carried on. Derricks have been sawn in two, ropes cut to pieces, or drenched with acid which eats them up, and castings broken, until the employers have lost many thousand dollars. The surprising thing is the high-handed audacity with which these mischiefs are done, and the entire failure of all attempts to protect the property of the stone-setters or to get hold of the offenders. Private watchmen have been set where property enough was exposed to make it worth while; but neither they nor the police have either prevented the damage, or brought any one to justice for it. One's indignation naturally rises against the police of New York, which allows such things to be done systematically and elaborately under its nose for months at a time; but complaint against them is an old story.

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The Committee on Public Buildings has reported against the extension of the east front of the Treasury Building, saying that, though the land required for the proposed extension was only assessed at about $400,000, its actual estimated value was $1,040,000, and the Government would have to pay at least that sum for it.

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Reports are published lately in some papers, that read like the wonders of Aladdin's lamp, of the discovery by two Hungarian shepherds of a Roman palace completely buried in the earth, and preserved with a completeness which quite throws Pompeii into the shade. It is said that the shepherds, while digging in the village of Ivan Egerszeg near Pesth, came upon a square curb of masonry covered by a flat stone. Lifting the stone, they found that the curb was the mouth of a deep shaft, a yard square, which communicated with a hall below. Letting themselves down by ropes, they reached a large square hall with painted walls, which communicated with a series of rooms fully furnished, some containing chairs, tables, and benches, and some beds and wardrobes; the latter filled with armor and ornaments.

Skeletons were found, but so much dilapidated that their race could not be determined. The report says that the shepherds kept their discovery to themselves till they attracted attention by offering for sale some of the gold ornaments which they had found, and, being apprehended as thieves, were obliged to make it known, when the crown officers took the matter in hand. An account said to have been submitted to the Hungarian Parliament states that the rooms belong to a palace built during the Roman occupation of Pannonia, which lasted from the time of Tiberius to the fifth century. It is said that the palace, which is built of stone and brick in two stories, is very large, covering acres of ground, and is buried under sixty feet of earth, on which grows a forest of heavy timber. If the story is sustained, and if the things found in the rooms belong to the epoch which it assigns to them, this will be in some ways the most decisive contribution to classic archæology of our day, and one of the most important.

## ARTISTIC CRITICISM.

A great drawback to the satisfactory practice of art among Americans, and to the popular appreciation of it as well, is the lack of good criticism. The criticism that we have is mostly either of the easy-going kind that pervades the average daily papers, — a "genial criticism," which receives with admiration whatever comes along, — or that which lays about unsparingly, and confounds the work with the author in irritating contempt. In fact, the characteristics of current criticism, next to the pervading one of want of knowledge, are mainly two, — its incapability of seeing a thing in more than one aspect, and the apparent impossibility of keeping clear of personalities. The old complaint, that artists do not write, and that writers do not know enough to criticise intelligently, does not cover the ground. Doubtless it is generally true in both respects; but any one who converses much with artists will find that on the whole the diversity and incompatibility of their critical opinions leaves him as much at sea as does the ignorance of the professed writer of criticism.

The fact is, that among American artists at least, — even among architects, whom we have chiefly in mind, and whose practice is more formal than that of either painters or sculptors, — there exists no recognized system of working to furnish canons by which the excellence of their work can be judged; while their keen interest in it, and their attachment to their own ways, altogether interfere with the dispassionate and judicial frame of mind which the critical function requires. The difficulty comes — leaving out of view the natural vehemence of the artistic temper — in great measure from the fact that our architects and other artists have no common and systematic training. Every one acquires his own manner of work from some course of study and practice peculiar to himself, and generally altogether empirical. Such a condition of things as obtains among the French architects, for instance, where the code of criticism is well established and understood, and where every one has a distinct justification to offer both for his procedure and for his judgments, is altogether unknown here. There exists, to be sure, here as well as elsewhere, a certain kind of *doctrinaire* criticism based on a few simple maxims, mostly moral, and of perfectly easy application by whoever chooses to take them in hand. Of this criticism, which is chiefly administered by amateurs, and reduces the skilful and the untrained, the artistic and the prosaic, to a most democratic level, we shall have something to say at another time.

It not unnaturally results from the kind of criticism to which we are accustomed, as well as from certain national traits, that Americans are peculiarly sensitive to it. The strictures which come from uncontrolled dislike of a work, rather than from a reasoned estimate of its faults, are apt to run into imputation to its author of intellectual and even moral baseness. On the other hand, the coaxing and patting of the common newspaper adulation soften the skin admirably to catch the smart of a vindictive lashing; and even a cautious spurring draws blood. There are no more deplorable symptoms to one who is interested in art in our community, than the prevailing want of faith in the honesty of any criticism, and the apparently hopeless tendency to degrade every expression of difference of opinion into a personal quarrel. The recent controversy over the question of the Albany Capitol is a case in point. It was a case of great delicacy and difficulty, one which especially called for forbearance and the most judicial treatment, one in which it was of the utmost importance for each party to maintain its position in the clearest, most dispassionate, and most logically convincing way. Yet it has been blown into a hot professional quarrel. The strictures of the Advisory Board, mostly reasonable in themselves, were expressed in language which was in parts needlessly annoying; and every success-

ive utterance grew hotter. The protest of the New York Chapter was legitimate in its purpose; but its warmth and asperity of tone took away the judicial character on which it should have relied for its influence; and newspapers on both sides lost their tempers altogether. The question became a struggle of excited advocates; and hardly a critical voice was raised.

No doubt a good deal of the sensitiveness to criticism which Americans show comes from a feeling that to criticise implies an assumption of superiority in the critic; and no doubt, also, the air with which it is administered is apt to indicate such an assumption. For instance, responses that we have seen to the protest of the New York Chapter have argued, that the architects of the Advisory Board were men of equal professional standing with any in the Chapter; and that to object decisively to the design of the Board was to assume superior knowledge or capability, and therefore "impertinent." But such imputations are entirely gratuitous, unless there be an actual claim to speak with authority, or a noticeable arrogance in the manner of the critic. The old saying, that the looker-on sees most of the game, is in its way as applicable to questions of this sort as of any other. The critic, if free from the prepossession of a fixed idea, has his mind open to many considerations from which the force of a definite creative impulse may divert the attention of the designer; and his notice will be often attracted by relations which the other in his artistic haste has overlooked. The converse proposition is also true, — that the critic cannot fairly judge the work of the artist unless he is careful to consider the point from which the artist regarded his problem, and to divine as far as he can the reasons and feelings by which his design was shaped. The artist from his own position has noted and been controlled by considerations which have seemed to him convincing, and which will probably escape the notice of a critic who forms his impressions from an outside look. There are those, indeed, who insist that an artist's work should be regarded and criticised solely from his own standpoint; but this is not reasonable, since his standpoint itself is as much a matter for criticism as any other characteristic. A man's work, bad in its actual effect, is not to be pronounced good because its faults result from his having chosen to regard his problem from a point from which his view of its conditions was imperfect or distorted. The rightfulness of his conception is one thing, the success with which he has carried it out is another: both should be considered in judging his work, and he is responsible for both.

Much of the personal character of critical judgment, and still more of its imputed assumption of superiority, would disappear if any common ground for it were recognized among us. Where the critic can support his decision only by the statement of his own opinion, it is easy to retort that his opinion is not better than another, and that to express it in reprehension of the work of his brother artist is to proclaim himself superior. But so soon as the critic refers his judgment to some principle, code, or scheme, recognized, even if not accepted by the artist, to which himself pays deference, the sting of personal assumption is gone. A decision for which a reason is given that convinces the judge if not the judged, has not the offensive air of one that rests on personal authority.

Rules of art or criticism may be fetters to original power; but we are not called upon to spend much time in contriving for the protection of geniuses. Arbitrary maxims are likely to cramp a healthy development in more ordinary folk: yet there are some principles in art; there are harmonies, and there are discords; and the collective study of men can determine them. For the mass of artists it would be a valuable means of training, as well as a wholesome restraint, if we could habituate ourselves to a kind of criticism such as prevails in the French *ateliers*, — keen, incisive, well understood, and impersonal, and requiring that the artist be able to explain and justify the treatment of his work, as the critic does his criticism.

## THE USE OF MOULDED BRICK. — I.

BY G. C. MASON, JUN., F.A.I.A.

Within the last few years, much attention has been given to the revival of long unused and perhaps forgotten arts; not merely to produce a lifeless repetition of old forms, but with a hearty desire to penetrate the spirit which animated their authors. While these attempts to revive the true and beautiful are going on around us, would it not be well to study the improved manufacture of our bricks, and their application to decorative purposes? The term "cunning" has often been applied to the brick-workers of three centuries ago. They left behind them monuments in clay, which, lacking perhaps that sublimity only to be obtained in stone, are still remarkable for grace in outline and delicacy in detail. It was said by Dr. Johnson, that "He who improves the public taste is a public benefactor;" and certainly, in the monotonous recurrence of the plain brick front in so many of our city buildings, there is a wide field for the architect and the modeller. Carved stone is in many cases too costly to admit of its being used for decorative purposes; while clay may, at a comparatively small expense, be made by skilful hands to assume forms of beauty in perfect harmony with the rest of the construction.

The quaint and narrow streets of the cities of Flanders owe much of their pleasing and homelike aspect to the use of moulded and ornamented brick; softened in color by the lapse of centuries, but still clear and sharp in outline, while wrought and sculptured stone is gradually but surely crumbling to decay.

No mode of building can show a more respectable history than that of brick, from the earliest ages, down through the Pyramids and the bricks mentioned by Vetruvius, to the present day. Bricks were used in Egypt and Persia from the earliest times, mostly sun dried, and mixed with chopped straw to give them tenacity. That these buildings have in many cases lasted to this day, shows conclusively how thoroughly the work was done. Of vast extent, they have for ages served as quarries, so that in modern Persian towns we frequently find bricks bearing the same stamp as those found amid the ruins of Babylon.

The pyramidal temples of Chaldæa are remarkable for the labor bestowed upon them, and far surpass the brick-work of the Assyrians; and they, in their turn, were surpassed by the brick-workers of India and Burmah at a later date, whose work is a marvel in richness of design and workmanship. The Chaldæans were accustomed to inter their dead in coffins of baked clay, covered with green glaze, and embossed with figures of warriors dressed in short tunics and long undergarments, swords by their sides, arms resting on their hips, and their legs apart.

We find great quantities of brick in the débris of Grecian cities, and amid the ruins of the Aztec and the Mexican. The Greeks held their workers of clay and pottery in high estimation, striking medals and erecting statues in their honor. Even their names come down to us, — among others that of Dibutades of Sicyon, who invented modelling in terra-cotta. Fergusson says that the chief interest of Persian architecture "rests on the fact of its being a modern reproduction of the style of the ancient palaces of Nineveh and Babylon, using the same thick walls of imperfectly burned bricks, and covering them with the same brilliant-colored decorations of glazed and painted tiles and bricks, carrying this species of decoration to an extent never attempted in any other part of the world. This, too, constitutes its principal claim to interest in an artistic point of view, since it shows how far polychromatic decoration may be used both internally and externally, not only without any offence to good taste, but with the most complete success in producing that beauty and splendor which is the aim of all architectural utterance." The Romans well understood the value of brick, and used it in their great engineering works, and civil and domestic buildings; but we find little account of their applying it in ornamental forms, preferring, in most cases, to cover it with the plundered marbles from conquered cities.

Sir G. G. Scott once said that it would be desirable to have measured drawings made of the ancient buildings of Belgium. For street architecture, particularly, they should be carefully studied. From Calais to Ypres, all the little towns were full of beautiful brick-work. He might say that there were four great brick districts in Europe, — Norfolk (England), Belgium, North of Germany, and North of Italy. To these, other writers have added

the north of Spain, where the Moor and Saracen have left their impress. Passing through the streets of these old historic towns, we are constantly struck by the picturesque outlines and details of the private dwellings. They seldom rise to the grade of high art; but, when grouped together, the effect is often charming. Nearly all are of brick, used undisguisedly, and depending on such forms as could be given to that material; and the evident aim of the citizens to ornament their dwellings honestly meets with the success which always attends the effort to develop truth.

Owing to the great scarcity of building-stone in all the states bordering the southern shore of the Baltic, many of the ecclesiastical and civil buildings of Prussia, Hanover, Mechlenburg, Brandenburg, and Brunswick have been erected of brick; but of a colder and sterner type than the brick-work found in the North of Italy. The earliest buildings in which brick appears as a prevailing element seem to have been erected about the close of the twelfth century; but the style could not be called fully developed until the thirteenth and even down to the middle of the fourteenth century. The oldest examples, principally ecclesiastical, are very simple both in plan and construction, — windows small, semicircular arched, with features of the Romanesque; the aisles of the same height as the nave, and one roof covering the whole. In the earlier examples, all the window-tracery is of stone, and very simple; the doorways small, deeply recessed, and richly moulded. In the fourteenth century domestic brick architecture of great beauty became prevalent, and was profusely decorated in a manner peculiarly adapted to the material, and one which attested the skill and taste of the designers of that day. Sometimes stone was introduced in bands, which tied the whole fabric together; but later all stone was discarded, and even the crockets, finials, and other ornaments, were made of brick-clay, often highly glazed; the use of black and brown glazed bricks being also common at this time.

The character of the designs and mouldings vary very much at different periods, but gradually become more elaborate. There is usually a stone plinth carried entirely around the building. The mortar-joints are very wide, from one-half to three-fourths of an inch, or even more. The mortar is very hard; the lime coming principally from Segeberg in Holstein. The bond used was the Flemish; i.e., the bricks were placed alternately, headers and stretchers, in the same row. Luneburg retains its street architecture nearly as it was in the middle ages; and its curious towers, spires, and high-stepped gables give it a most quaint and pleasing appearance.

Fergusson says that "in Eastern Prussia are many brick buildings, which from their picturesqueness and the appropriateness of their forms half disarm the critic." He also adds that "The Marien Church at Brandenburg exhibits this style carried to its utmost excess. The lower part is very good, and the ornament around the doors and under the windows well placed; but higher up the ornament is excessive, and so placed that at first glance it is difficult to say whether the building is for ecclesiastical or civil purposes."

Rotterdam, Delft, and Leyden are famous for their façades of richly ornamented and moulded brick. In Pomerania the physical features of the country have had much to do with its architecture; flat and uninteresting, broken here and there by hills of sand, and traversed by broad, sluggish rivers, with here and there great masses of granite rock. This stone is used for the bases of buildings; but above they are nearly always of brick, in some cases extremely simple, in others moulded with great delicacy, rivalling the finest terra-cotta; sometimes carved with the sharpness of outline and boldness of design seldom found on any material except stone. Instead of open timber roofs, brick vaults were frequently used. Moulded, carved, enamelled, and colored bricks were freely used for decoration. The surface ornamentation was generally small in detail, being made of the same size as the bricks for the walls. These were mostly moulded, but sometimes carved by hand, often after the bricks were in position, when they were cut into many grotesque forms, heads frequently boldly projecting from the buttresses, and strongly emphasized by undercutting. The window-traceries are entirely of brick, and many of them very beautiful. The doorways frequently have jamb mouldings made of very large blocks of glazed terra-cotta, deep brown and black being the prevailing hues. Here, as in other parts of Germany, the joints are very wide, fully three-fourths of an inch, the bricks varying in size from 11″ x 5″ x 3½″ to 11½″ x 5¾″ x 4.″

Allusion has been made to the wide joints of mortar used by the old masons, so different from the modern method, where every effort seems to be made to render them as thin and as little seen as possible. Many of the great buildings of Asia and Europe have been constructed of thin bricks and thick beds of mortar, often as much mortar as brick. The Romans well understood the use of mortar, and did not spare it. Vitruvius tells us that the pieces of mortar falling from old walls were of such great hardness and tenacity that they served to make tables. The Greeks were so scrupulous in its composition that it was common for them to keep ten men constantly employed for a long time at each basin, or bed. It was also a maxim among the old masons, that mortar should be diluted by the sweat of the brow, i.e., worked for a long time, instead of drowning it with water to have it done sooner.

## THE ILLUSTRATIONS.

LECTURE-HALL OF THE PRINCETON THEOLOGICAL SEMINARY, PRINCETON, N.J. POTTER AND ROBERTSON, ARCHITECTS.

This building, which is now in course of construction, will, when finished, be used by the Theological Seminary for lecture-rooms and museum; the latter being in the third story. The size of the building, on the ground, is one hundred and eighteen feet, front, by sixty feet. The material with which it is faced is Quincy granite up to the water-table line; above this the ashlar is of Newark brown stone, trimmed with Ohio stone. The building will be completed by the 15th of September next.

COTTAGE FOR DR. L. F. HUMESTON, HOLYOKE, MASS. MR. HENRY F. KILBURN, ARCHITECT.

This building is about thirty-eight by fifty-one feet two stories and attic in height, with a tower at the south-west corner rising sixty feet from the ground. The details are all worked from solid timber. The first floor gives four rooms and a hall, the latter being seven feet by nineteen feet, with a large closet, also a side staircase hall fifteen feet by seven and a half feet. The main hall communicates on the right with the parlor, seventeen by fourteen feet, with a large bay window at front end, and projects far enough beyond the hall and library to receive a piazza eight feet wide, which extends across this and the south sides of the building. On the left of the hall is the library, fourteen by fourteen feet, and in the rear of the library, the dining-room fourteen by fourteen and a half feet, with alcove for sideboard, connecting through butler's pantry with the kitchen, fourteen and a half by fourteen feet. A rear hall, containing stairs to cellar and second story, completes the first floor. The second story contains a hall, lighted at north end by a large stained-glass window, four bedrooms with large closets for each, a bath-room, a linen-closet, and store-room. Servants' rooms, and other well-lighted rooms suitable for storage purposes, are provided in the attic story. The cost of the building will be about five thousand dollars.

RESIDENCE OF GEORGE S. BENNETT, ESQ. MR. BRUCE PRICE, ARCHITECT.

This house is built of brick, rough-cast with cement mortar, and rubbed down so as to be plumb with the projecting surfaces of the brick, and then painted. The caps, plinth, &c., are of Messhappen blue-stone. The entrance-porch and terrace-posts are of Ohio freestone, and the columns are of blue marble.

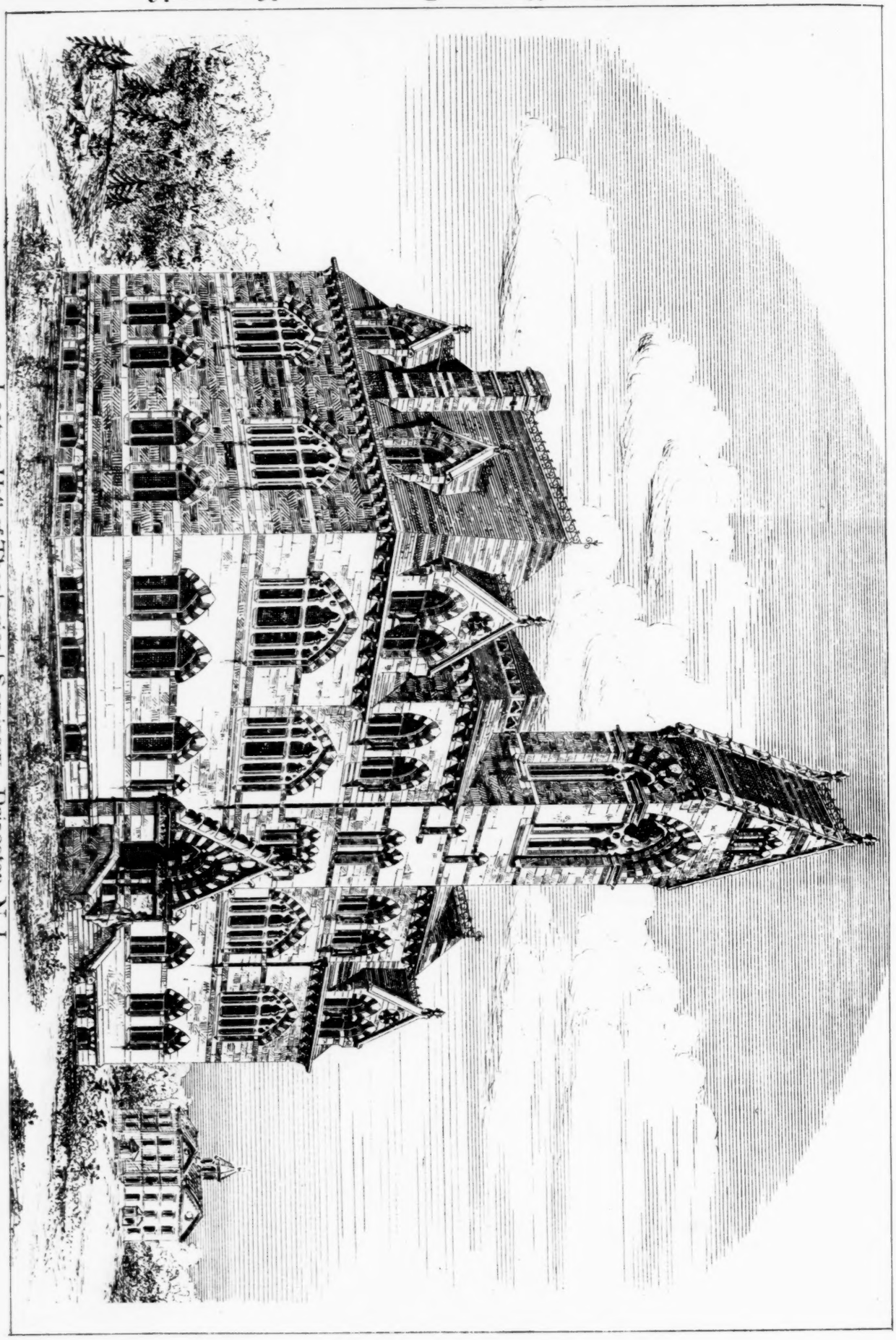
The dining-room is finished in ash and cherry, the kitchen in chestnut and cherry, while the rest of the main floor is finished in walnut. The principal rooms and chambers open upon a galleried hall eighteen feet square. The house is heated and ventilated by Messrs. Belfield's "indirect" steam apparatus. The terrace, porch, vestibule, and conservatory are floored with Maw and Co.'s tiles. The house will have cost, when completed, about forty thousand dollars.

THE CASS MONUMENT. MESSRS. WARE AND VAN BRUNT, ARCHITECTS.

This monument, built of Concord granite, is erected in the cemetery near Detroit, to the memory of the Hon. Lewis Cass.

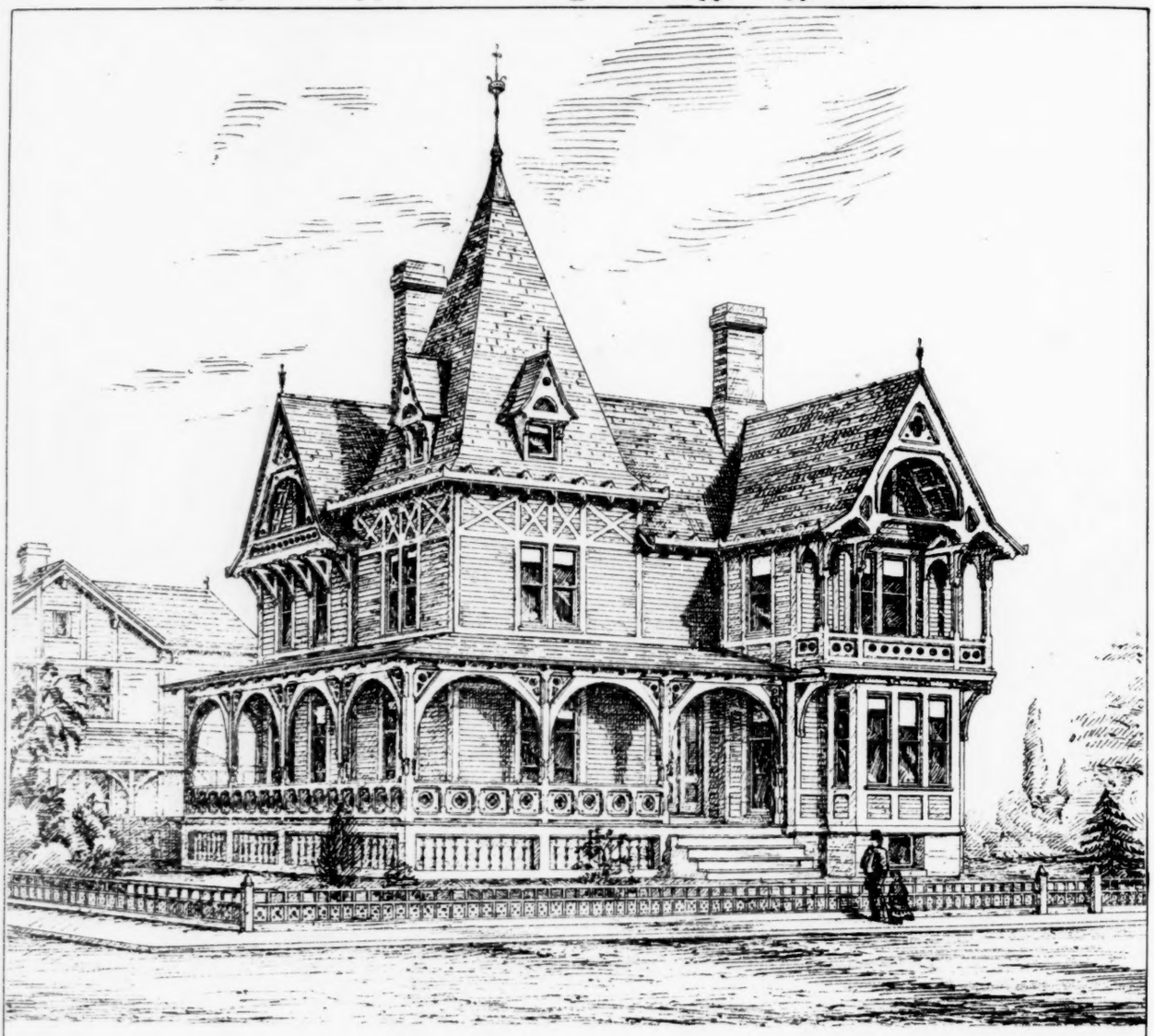
## THE ROYAL ALBERT BRIDGE.

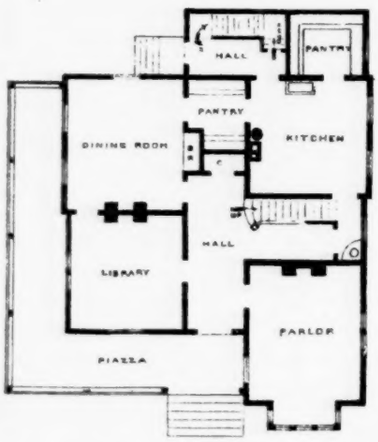
For some time past, need has been felt of a second bridge over the St. Lawrence at Montreal; for the Victoria Bridge is becoming more and more inadequate to satisfy the calls of the growing industries of the city; and in very few years it will find itself strained to the utmost to accommodate the traffic of the Grand Trunk Railway alone. Moreover, the city is, for two months or more, cut off entirely from the southern side of the river, from



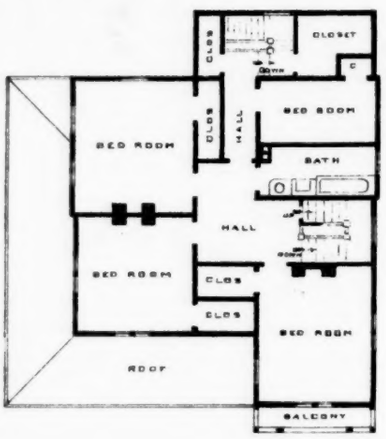
Lecture Hall of Theological Seminary: Princeton N.J.

POTTER & ROBERTSON, ARCHITECTS





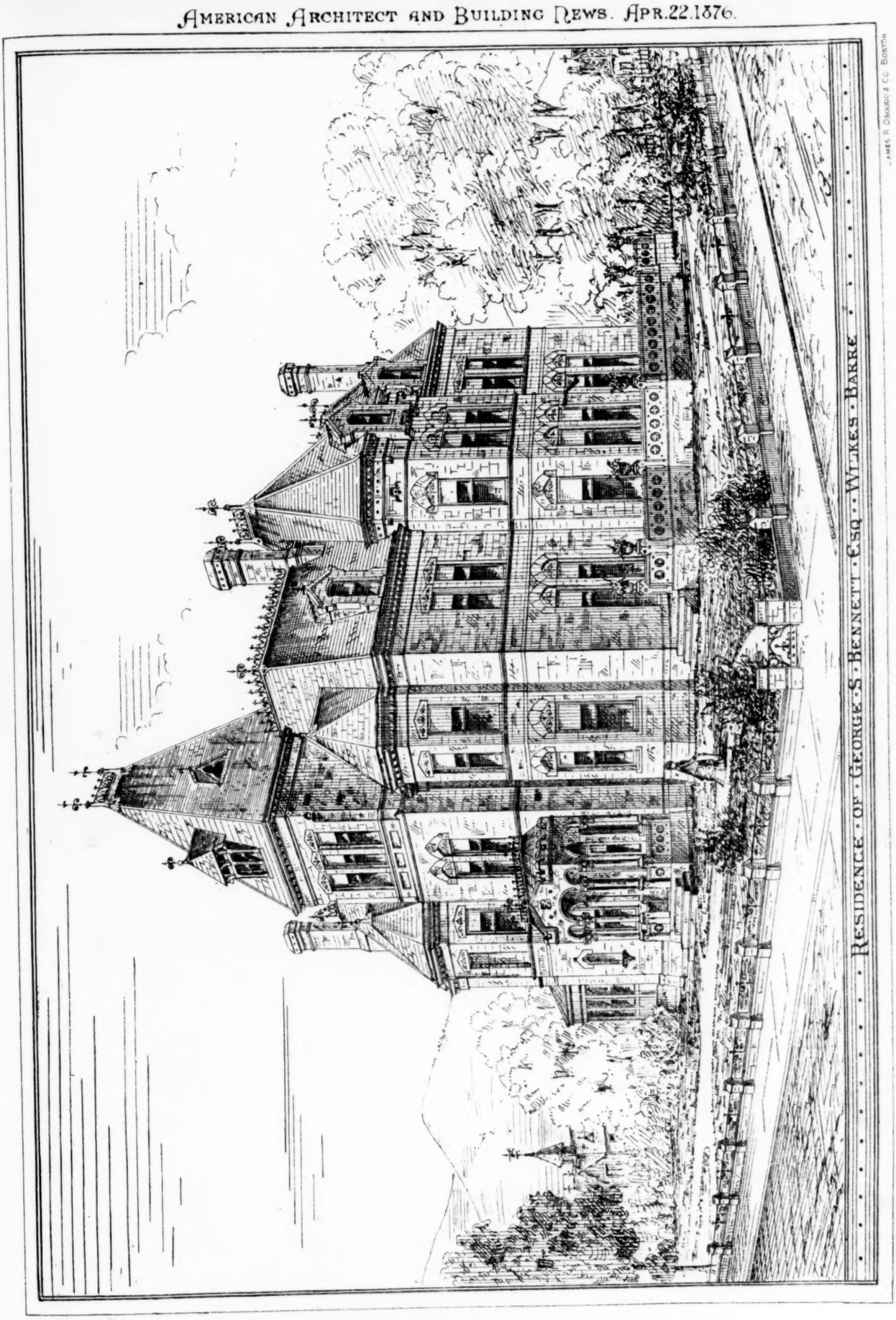

FIRST FLOOR PLAN




SECOND FLOOR PLAN

# Cottage for Dr. Humeston. Holyoke. Mass.

HELIOTYPE
H. F. KILBURN, ARCHITECT, BROADWAY, N.Y.
JAMES R. OSGOOD & CO. BOSTON



RESIDENCE OF GEORGE S. BENNETT, ESQ. WILKES-BARRE

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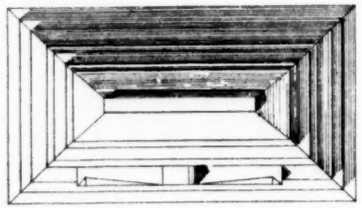
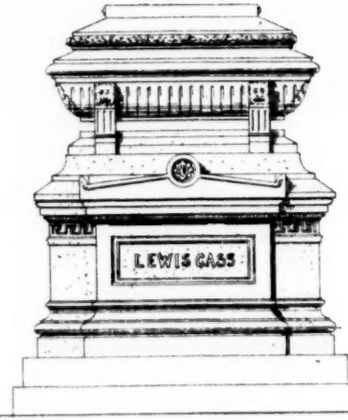
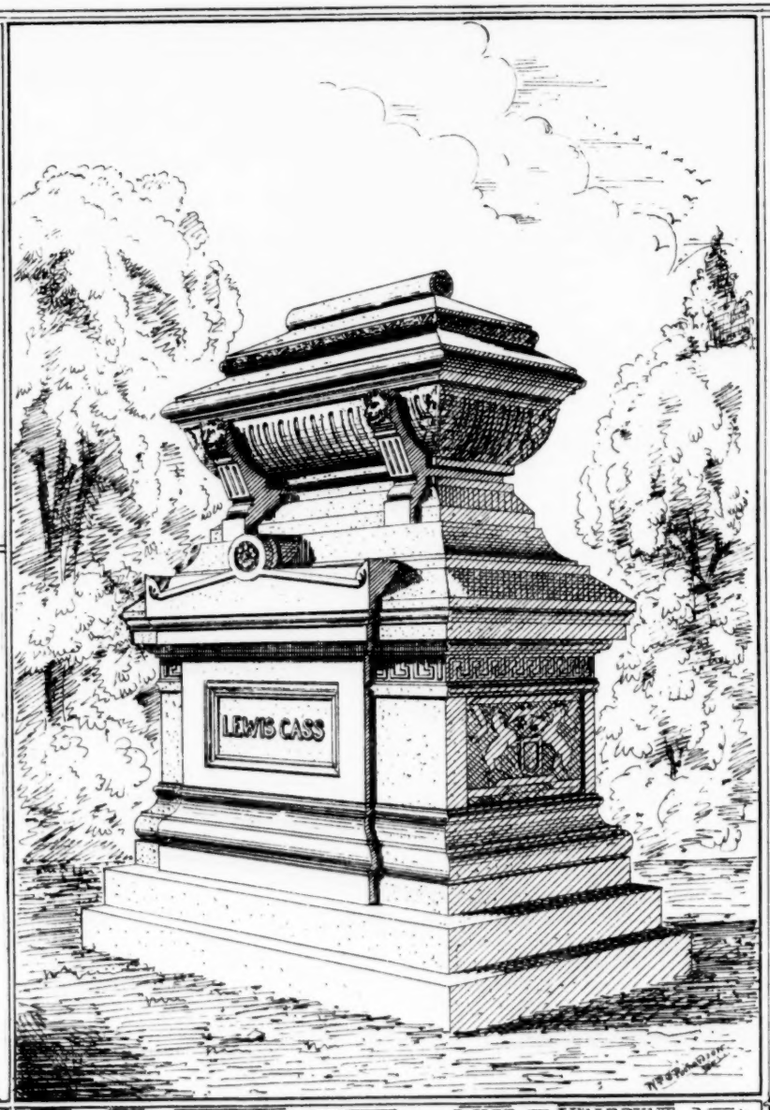
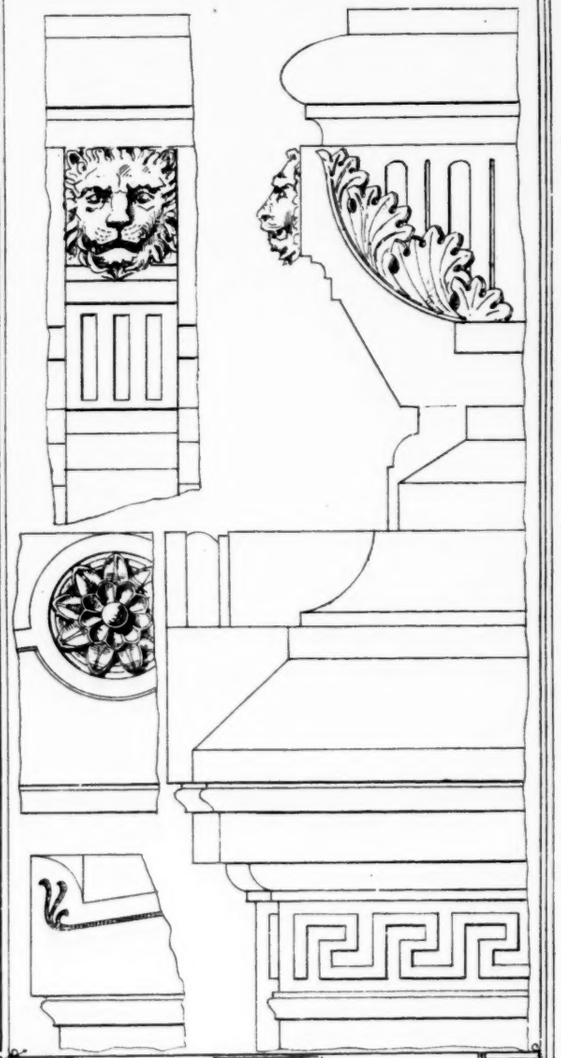





— PLAN AND ELEVATION —




THE CASS MONUMENT — DETROIT. — WARE AND VAN BRUNT — ARCHT'S.



— DETAILS —

HELIOTYPE

JAMES R. OSGOOD & CO. BOSTON

whence it obtains the bulk of its market supplies. During these two months prices go up; and the excess of money so spent would be no small part of the sum that would be required to pay the interest on the cost of the bridge. It is proposed to build the new bridge two miles below the Victoria Bridge, and at the spot where, years ago, they thought of erecting the Victoria Bridge. The proposed bridge is to be carried over the river in sixty spans varying in length, a great number of which are to be suspended over dry land; for, as the bottom of the superstructure is to be at a height of one hundred and twenty-five feet above mean water-level, to allow for the passage of ocean steamers, the approaches to the bridge must extend a long distance inland from the river banks.

The following description of it is given by the Canadian Illustrated News: —

"Leaving the level of the ground on the line of Sherbrooke Street, it is carried as a viaduct east of and parallel with Colborne Avenue, at a level of ninety feet above the surface of the ground, in spans varying from 150 to 200 feet each. Striking the navigable channel of the River St. Lawrence near Molson's Brewery, it passes over to St. Helen's Island with six spans. Reaching St. Helen's Island, four spans of 240 feet each will carry the bridge to the height of land where this first section of the structure will terminate.

"From the south side of the island, the second section of the bridge will be carried over the unnavigable channel of the St. Lawrence to the south shore, by twenty-one spans of two hundred feet each, grading down with an inclination of one foot in one hundred feet. Reaching the south shore, the bridge becomes again a viaduct of five additional spans of 200 feet each, or until the superstructure has approached within such distance of the natural surface of the ground as to make embankment more economical; and thence proceeds with ordinary grading to a junction with the Montreal, Portland, and Boston Railway, and with the Grand Trunk.

"The total length of the bridge and viaduct will be 15,500 feet, or within a fraction of three miles.

"The piers to be placed in the two channels of the river will be designed on the general principle of those of the Victoria Bridge, for the purpose of allowing the ice to cut freely past. Those in the navigable channels will be sunk in *caissons*, thereby obviating the use of coffer-dams and other obstructions in the river, and rendering pumping unnecessary. In the south channel the water is very shallow, with a rock bottom, and very little expense will be incurred in putting in the foundations of the piers.

"The iron superstructure, from end to end, will be composed of four independent longitudinal ribs, or open lattice girders, placed certain distances apart, and strongly connected laterally. These ribs will be provided with the usual friction-rollers on each alternate pier, to provide for expansion and contraction. Between the two inner girders, on the lower floor, will be a space of eighteen feet to accommodate two tracks for trains of city cars, to be drawn by dummy engines. Between the two inner girders and outside girders, on either side of the bridge, will be spaces of fourteen feet respectively, for ordinary cart and wagon traffic, passing in one direction on the western, and in the opposite direction on the eastern side of the bridge. Exterior to these two outside girders will be footwalks firmly supported on brackets of iron, strongly attached to the side-girders and floor-beams; they will each possess a width of eight feet, and be provided with ornamental railing for the protection of pedestrians.

"At a distance of fifteen feet above the lower floor will be placed a second one, strongly connected and braced with iron kelsons and gussets to the longitudinal girders. On this floor, between the two inner girders, will be placed a railway track, with crossing arrangements for trains, as before stated, at St. Helen's Island. The spaces existing between the inner and outer girders will each possess the width corresponding to the carriage-ways below, and are intended for carriages and other vehicles requiring a higher rate of speed than carts or wagons. Should a second track ever be required for railway purposes, across the entire length of the river, a fifth girder can be erected on the up-stream side of the bridge, and be supported by iron columns from the saddles of the ice-breakers, at a comparatively small cost.

"The superstructure has been designed for carrying the following live load under a coefficient or factor of safety of six; in other words, the weight of live load to be presently mentioned, including the weight of the bridge itself, is but one-sixth of the ultimate strength or actual breaking weight of the structure. This live load is distributed as follows: —

1st, A train made up of locomotive engines, running 30 miles per hour, equal per lineal foot to . . 2,500 lbs.
2d, Two trains of city cars with dummy engines, loaded with passengers, going six miles an hour, say . 2,500 lbs.
3d, Carriage-ways and foot-walks, loaded at 100 lbs. per square foot . . . . . 7,500 lbs.

Making a total of 12,500 lbs. per running foot; or, divided into the four girders, will make each one carry, in addition to its own weight, about 3,100 lbs. per running foot. Many bridges have already been built carrying even greater live loads.

"The following comparison is made between the two rival bridges: —

| ROYAL ALBERT. | VICTORIA. |
|---|---|
| 1 span 550 feet skew. | 24 spans 242 feet each. |
| 4 " 330 " " | 1 " 330 " |
| 4 " 240 " square. | |
| 51 " 200 " " | |
| 4 approaches, 400 feet each. | |
| With abutments, piers, &c., making about 15,500 lineal feet of iron superstructure. | With piers, &c., making a little over 7,000 lineal feet of iron superstructure. |
| Greatest clear height above water, 150 ft. | Greatest clear height above water, 60 ft. |
| Total height of centre span above water, 210 feet. | Total height of centre span above water, 82 feet. |
| Greatest depth of water, 40 feet. | Greatest depth of water, 22 feet. |
| Strength of current, 6.9 miles. | Strength of current, 7 miles. |
| Estimated cost, $5,000,000. | Actual cost, $6,300,000. |
| Estimated time of building, 3 years. | Actual time of building, 6 years." |

## CORRESPONDENCE.

NEW YORK.

The closing week of March was a busy one among the New York architects, especially among the members of the New York Chapter. On Tuesday, the 28th ult., a special meeting of the Chapter was held; and again on Wednesday the Chapter was called together to close up the work of the preceding day. The first meeting was called to consider the question of a proper representation of the professional works of members at the Centennial; and the rooms of the Institute presented a very crowded appearance when the drawings had been sent in. Frames of all shapes and sizes contained perspectives, plans, and elevations, in color and line, showing the handiwork and ability of the members of the New York Chapter. Mr. Bloor, the secretary, had a small country house with a couple of rural churches in alternative design. Mr. C. W. Clinton was represented principally by photographs, in large size, of details of cut-stone work, from first-class dwellings on Fifth Avenue. Mr. H. M. Congdon had a large perspective view of St. Andrew's Church, Harlem, and of All-Saints' Church in Worcester, Mass. There were also a number of country residences from Mr. Congdon's office. Henry Dudley had also several churches, — St. John's Church, Waterbury, Conn., St. Peter's at Albany, and St. Peter's at Niagara Falls, among the number. Henry Fernbach had a variety of work. There was a photograph of a cemetery vault, views of the German Savings Bank, and *Staats-Zeitung* Building, — granite structures recently completed by him, — a view in perspective of the Lexington-avenue Synagogue, New York; and perspectives of part of the Mutual Life Insurance Company building at Philadelphia. A view of the staircase of this latter edifice was in most brilliant coloring. C. C. Haight shows St. Paul's Cathedral from Portland, Me., with a number of country dwellings. William F. Hallett has views of details from country houses, useful as studies in wooden construction. J. Cleaveland Cady contributes drawings of the Peabody Museum at Yale College, the Alexander Mission in this city, and a competition drawing prepared for the New York Tribune building. Gambrill and Richardson show various views of the work now going on for Trinity Church, Boston, with a few large country houses. From Hatfield's office comes a number of views in iron construction, mainly from completed buildings in New York City. H. Hudson Holly has a few sketches of wings and gables of picturesque country dwellings, little gems among the larger sheets. R. M. Hunt covers much space with a series of views showing the designs for the several entrances of Central Park. There is a perspective of the iron building, 476 Broadway, in all its original brilliancy of color. The Lenox Library is shown in perspective, plan, and section. A competition drawing for Trinity Church, Boston, a view of the Presbyterian Hospital in this city, and a line-drawing of the Tribune Building, are among the principal works from Mr. Hunt's office. E. H. Kendall contributes a drawing, sent in for competition, of the German Savings Bank. Napoleon Le Brun shows only a view of the Masonic Temple, New York, and a view of the altar for the Cathedral of St. Paul and

St. Peter in Philadelphia. Carl Pfeiffer only shows views of his recent work on Dr. Hall's Fifth-avenue Presbyterian Church, with an alternative design for the same work. Mr. Pfeiffer ought certainly to show some of his hospital designs. George B. Post is another prolific designer; his drawings being many in number, and large in size. The Williamsburg and Troy Banks are given, also the newly finished Western Union and Chickering Hall buildings. The New York Hospital Building on Fifteenth Street is shown, with competition drawings sent in for the Evening Post building and the Hartford State Capitol. From Potter and Robertson's office come a large number of joint designs, while individual drawings are also presented. The Princeton College Hotel and Dormitory are shown. William A. Potter contributes a competition design for the Boston Trinity Church, and several other church perspectives. R. Upjohn has a perspective of St. Thomas's Church, New York; while Mr. R. M. Upjohn has a number of Gothic designs, churches, schools, and dwellings, with the Hartford, Conn., State Capitol design in two perspective views. The collection, as a whole, is a very instructive one, and well worthy of time for its study. There are many names, however, on the Chapter rolls, whose works are not seen on the list of drawings contributed. Mr. Hathorne, Mr. Oakey, are not represented. The office of Renwick and Sands sends nothing. Littell is not seen in his works; nor has Mr. Harney any thing on exhibition. The quantity of drawings might readily be doubled without in any way detracting from the quality. Messrs. Pfeiffer, Hathorne, Hunt, and Upjohn were appointed a Committee on Selections, and very readily performed the duties by selecting all the designs offered. The Committee on Transportation and Care while at Philadelphia, consisting of Messrs. Hunt, Bloor, Littell, Holly, Le Brun, and Haight, should see to it that each drawing has attached a proper and uniform legend, legibly informing the visitor in regard to the design shown. At present many of the drawings are without a sign of lettering; and, while they are readily recognized while in the Chapter rooms, at the Centennial they will become mere "pictures," unless properly labelled.

The report of the superintendent of buildings of this city, for the past quarter-year, is not at all re-assuring. Compared with the corresponding period of last year, there has been a most marked falling-off in the estimated value of the proposed new buildings. The number of plans entered were, for the first quarter, 202 in 1875, against 196 for 1876. The number of separate buildings were 335 and 300 respectively. In alterations, the figures run about equal for the two years. There have been, of new buildings commenced in 1875, 134, and, in 1876, 167; and, of new buildings completed in 1875, 188, and, in 1876, 249. The pith of the matter, showing that under this array of figures the building trade is really at a low ebb, is shown in the cash columns, which read, —

| | 1st quarter, 1875. | 1st quarter, 1876. |
|---|---|---|
| Estimated cost of new buildings . | $4,736,100 | $2,731,747. |
| Estimated cost of alterations . . . | 963,797 | 713,189. |

At the close of the quarter just ended, there were 543 new buildings in progress, against 578 at its commencement. In alterations, the gain is the other way; 192 pieces of work now going on, against 100 three months since. The classification of the proposed new building was as follows: first-class dwellings, mainly brown-stone fronts in rows, 80; second-class dwellings, 23; French flats, 10; tenements, 99; stores, 17; office buildings, 3; workshops, 15; church, 1; public buildings (show-room and fire-engine house), 2; stables, 17; frame structures, 33; total, 300.

A class of facts which has just come to light through the papers here does not seem to indicate a very happy relation between the employers and workmen, in one section of the building trade at least. It seems that, for more than a year past, the employing stone-setters have been made the victims of a band of conspirators, who have systematically and wantonly destroyed thousands of dollars' worth of machinery. The whole matter has been kept very quiet, only to encourage the element to bolder operations. No arrests have been made; but every indication points to some disaffected members among the derrick-men, or hoisting laborers, employed by the stone-setters, who visit the works at night, and by sawing the derricks, cutting the derrick-ropes, breaking the castings, and in other ways, work as much destruction as possible. Some of the instances are particularly aggravating, and show a determined endeavor to do mischief, which make the perpetrators most dangerous members of society. So common have the outrages become, that their occurrence does not excite any special outcry. The men, by mere force of habit, now inspect the machinery each morning as a precautionary measure. To put a watchman on a small work, where but one derrick is in use, would not pay; and to leave it exposed is to invite destruction. Where several derricks are up, a watchman is put on; but, even with the guardian present, aquafortis or other strong acid has been frequently poured on the ropes, eating them into shreds.

Messrs. Lamb and Begg were the stone-setters at the Tribune building, and would doubtless have suffered there, but for the enclosure of the whole work by a high fence. They were not forgotten; and at their next piece of work at the Hartford, Conn., Capitol, the derricks were reached, and the ropes cut by the same mysterious power. The latest outrage was at a hotel now being erected at Hunter's Point, across the river here, where a derrick was taken down from a building, and injured as usual. This operation must have required at least four men posted on the mode of handling derricks. It would be needless to multiply cases to show the extent of the plottings. There is no open dispute with the men. They receive $2.50 per day of eight hours, and are satisfied; but the employers offend other rules of the trades-union, and suffer in consequence. The whole story certainly shows a most remarkable degree of baseness and dastardly conduct; and the surprise is, that the work should have been carried on so long without detection.

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Chicago.

The report of the Advisory Committee to the New York Capitol Commissioners attracts much attention among the architects of Chicago; and they are anxious to get the whole history of the matter. If we are to believe all that the Committee say, Mr. Fuller will have to be set down as a stupid dunce, which conclusion is hard to accept in view of the fact that his exterior design, with which every one is so familiar from its numerous illustrations, is generally regarded as one of the most successful of the many designs in the modern French style, which have been adopted for public buildings throughout the States. Whatever its failings are, they must be attributed to the style of architecture to which he has been confined, rather than to his treatment of it. Of the interior, no one who has not examined the plans is competent to judge.

In regard to the exterior, the profession here will frown upon all attempts to mutilate Mr. Fuller's design without his assent. The principle should be maintained, that an architect, after his design has been approved, and his work commenced, must be respected and sustained in whatever he does to jealously guard his reputation. It too often happens that clients attempt to indulge their own fancies at the expense of the reputations of their architects, by making alterations in designs; and in this light the question comes home to every practitioner. How much worse it is to see these things done by rivals who temporarily have the power to do so!

The question is not whether the Committee's design is better than Mr. Fuller's. My own opinion is, that, if the whole building were in that style, it would be a more valuable work of art than his. But the question is, whether they had any moral right to force upon him a new design for the finishing of his structure, which is not only distasteful to him, but is discordant with the work that is done and must remain. There are more ways than one in which his design can be modified; and it is not difficult to conceive that even a man of the strongest Gothic tendencies, had he the *motive* to improve rather than to destroy, could accomplish all that is desired by the State in the way of economy and retrenchment, and produce a result entirely consistent with the principles of design laid down by the Committee, without doing violence to the work already done. This is just what Supervising Architect Potter is now doing with the Chicago Custom House, a building whose faults in design are incomparably worse than those of the Albany building.

The Queen Anne distemper has broken out here. Our *nouveaux riches*, who go to New York and get their art education from fashionable furniture dealers and decorators, come back and bewilder our manufactufers by demanding furniture in the Queen Anne style. But they are easily satisfied with an immoderate use of turned balusters (always swelling in the middle) and small raised panels thrown confusedly together. If those dictatorial New York caterers are making this sort of thing fashionable, the honest Gothic revivalists among her architects may certainly congratulate themselves that their style has escaped the clutches of the dispensers of fashion. But this, like every thing else of the sort, must have its end.

In Chicago, though we have a faithful band of the revivalists, — of whose work I will have more to tell you soon, — the place is

deluged with imperfectly-made imitations of mediæval work, called "Eastlake" furniture, of which I can only say, Heaven save them, if Eastlake should come over here, and see such abominations! The berating which he gave the London shopkeepers would be nothing to it. The other day I ventured to offer some slight criticism on one of these articles, but was assured by the salesman, that, as it was from Mr. Eastlake's own "Book of Designs," it could not be changed.

## "THE REMONSTRANCE OF THE ARCHITECTS."

To the Editor of the American Architect.

*Sir*, — I have had my attention drawn to the Albany letter in The World of April 1, containing "The Remonstrance of the Architects" in the matter of the New Capitol, and an editorial on the same subject.

Considering, that among the prominent practitioners of this city who unanimously adopted the memorial it thus designates, were included the architects of the Connecticut State House now being built at Hartford, of the Lenox Library, of the Williamsburg Savings Bank, of the Equitable Insurance building (or at least one of its associate architects), of the Masonic Temple, and of many other structures certainly not less monumental and important than, and quite as much admired, whether by experts or by the public, as the average productions of the two architects out of the three members of the Advisory Board, — one of whom is, by the way, himself a member of the Chapter, — its phrase of "amusing impertinence" is certainly as apt as it is frank; apt, that is, as applied to the juxtaposition indicated in the performance of that member of the Board, who may safely be held responsible for the design.

For "*Risum teneatis?*" I am persuaded, must have been the mental question of that undoubted artist as he submitted the result of his labors to the artistic discrimination of our lawgivers. No one less readily than himself would give a moment's serious entertainment to the scheme of projecting his work beyond the paper it is drawn on; the more especially as his "design" — I think two out of three architects who may have paid attention to his previous productions would allow — falls, *per se*, far below his best performances, and has probably received little of such attention as he would have bestowed on a *bona-fide* project intended to be worked out into enduring shape.

If the Advisory Board had limited its functions to the simple advice it was ostensibly created, as I understand, to give, it would have performed a duty which most other architects would no doubt have been glad to have the opportunity of performing; and the New York branch of the Institute of Architects would not have been called on, in the interests of public architecture, to depart from its rule of never, in its official capacity, offering "uncomplimentary criticism" or the reverse as to the "style" of its professional brethren; agreeing as it does, with yourself, that distinction of style "is a question which every educated architect is at liberty to hold his own views upon," — whether the style be that of the designing architect of the Advisory Board, or that of the architect of the actual incompleted structure under question, which is now committed to a certain style beyond the artistic possibility of alteration, or whether it cannot be brought under any received classification at all. * * *

## PNEUMATIC SEWERAGE.

To the Editor of the American Architect.

*Sir*, — An article appeared in the April number of the Atlantic Monthly, describing to some extent the new system of Capt. Liernur for the disposal of sewage by pneumatic processes. At the present moment, when it is proposed to devote something like six millions of money to the construction of enormous sewers, whose object is to carry a large quantity of valuable fertilizing matter out into the ocean, the question arises, Is it impossible to save this, and make it profitable? Capt. Liernur claims that his methods, at present in perfect working order throughout Holland, and in certain parts of Germany and Switzerland, have proved that the sewage of cities can be saved without offensive odor, can be rendered innocuous, and finally disposed of in an easily portable form, yielding a profit of four or five per cent after payment of all expenses. The outlay for the construction of conduits, and the erection of necessary buildings and engines, is but small, as compared with the old methods, while the small iron pipes employed by himself are less liable to damage. This process deals especially with excrementitious matter, though liquids are taken care of as well, being first rendered innocuous. He considers that the sewage question is no longer, How shall we remove filth from our midst? but, How shall we render it odorless and profitable, and prevent the dissipation of any of its valuable properties? He takes it within twenty-four hours of its production, before fermentation has set in; and, conveying it by pneumatic pressure to a central receptacle, through which coils diffuse the heat from the escaping steam of his engines, has in a few hours more a dry powder, representing the value of Peruvian Guano. The gases which have barely had time to form are consumed by the draught of the furnaces. This is of course a very different matter from the pneumatic emptying of cesspools in which filth has been stagnating for months. The foul water accompanying sewage-matter he conveys by different channels to beds of coke, through which it passes and becomes pure; the coke itself, after drying, gaining fifteen or twenty per cent of combustible power. The traps of street-drains he also connects with his engines, and empties daily and instantaneously of their accumulating filth. All attempts thus far made to utilize sewage which has been diluted by vast quantities of water have proved unprofitable. Capt. Liernur goes to the root of the matter, by keeping the gold from getting into the quartz. Further, the application of superheated steam to fæcal matter destroys all germs of disease, which present methods merely float away to spread their contagion none the less effective in a diluted form. Certain modifications of the plumbing of houses are desirable in the application of this system; but it is suggested that, if desired, the present might remain, a small tax being levied for their continued use. The great bulk, however, of valuable matter, is derived from the masses of the population, who do not possess the improved forms of plumbing.

A great advantage of Capt. Liernur's system is, that it can be tried on a small scale, over a limited area, by way of experiment. Thus its use became extended in Holland, until it embraced entire cities. The whole subject is one at present most particularly deserving public attention.

Nelson L. Derby.

## AMERICAN LANDSCAPE GARDENING.

To the Editor of the American Architect.

*Sir*, — Architects and Landscape Architects, Landscape Engineers, Landscape Superintendents, Landscapers, Civil and Landscaping Engineers, — these are a few of the countless names under which landscape gardening is practised.

A great many of the people who practise the art bear the same relation to a real landscape gardener that a carpenter does to an architect. A professional man who knows the difference between a deciduous and an evergreen tree is very apt to add an afterthought to his business card, stating that he is prepared to undertake the development of estates, &c., when really as much fitted for such work as an ordinary day laborer. There are some twenty different people in our city (Boston), that profess to be landscape gardeners: yet very few there are that have had any special training on the subject, or that can make trustworthy estimates of the cost of various classes of work.

Indeed, there are some who even go so far as to say that such work cannot be estimated upon with any certainty, and that a man who undertakes to improve an estate must "go it blind." As a consequence, the growth of landscape gardening is very small. Customers are disgusted with the results obtained at an outlay that seems to them enormous; and, as a rule, employ ignorant contractors, who carry out, in a partial way, the owners' ideas.

Is this necessary? Let us consider, for a moment, the various branches of work that are liable to occur on the average Massachusetts estate, and see, if possible, wherein lies the difficulty. There is a small country place of four or five acres to be improved. On it stands a house, painted white of course, and set parallel with the street; possibly a ragged looking balsam-fir on either side of the front door, flanked by a dozen silver poplars, &c. Leading to the house is a straight avenue, garnished next the street with enormous granite gate-posts, set six inches too high, so that the rough uncut stone is shown; a cast-iron fence along the highway, painted black it is needless to say; while the stable, of a doubtful color, and parallel with the house for symmetry, fills up the background. Very possibly one or two days in the week the passer-by will notice the clothes-yard instead of the stable. Why will people *always* put a clothes-yard in full view?

The proprietor, imagining something is necessary to "smarten" up the place, applies to a landscape gardener for advice and a

plan, desiring also an estimate on the cost. Unfortunately the man applied to is frequently one whose ideas are limited to cast-iron fountains, vases, and statues, — one who suggests in a confidential tone that he knows where half a dozen cast-iron statues can be bought at a bargain, just the thing for the lawn; or that a lot of hideous urns would transform the place into an Italian garden. No estimates whatever are made; mechanics are set at work by the day, and the proprietor systematically "victimized," until, in despair, the work is stopped, as the "artist" will have it, half done. It may be said that this rule will apply to at least one-half of all the places that are treated. Is it to be wondered at, that the art of landscape gardening is backward?

Work on a place similar to the above may be divided as follows: —

1. Topographical survey. 2. Sub-drainage. 3. Grading, and surface drainage. 4. Building avenues, walks, &c. 5. Removing trees, grubbing, &c. 6. Laying stone-work, setting fences, &c. 7. Painting. 8. Planting. 9. Contingencies (twenty per cent). 10. Superintendence.

This covers seven-eighths of all the cases that arise; and no portion of it is there that cannot, by using a little care, be estimated upon securely. If the public would refuse to employ people for such work unless proper figures were furnished, then landscape gardening would take its proper place among the professions, — on a level with architecture.

The true method of arranging an estate similar to the above is: —

1st, Ascertain the amount of money the proprietor is willing to expend.

2d, Draw sketches for improving the place until the owner is satisfied with some one of them.

3d, A general plan being decided upon, draw every possible detail; and with proper price-lists, planting-lists, &c., make careful estimates.

4th, Write specifications for all classes of work, including planting; and submit them to the proprietor, with figures of the same, for approval or otherwise.

5th, The specifications and estimates being approved, contracts are drawn, and awarded to responsible parties for the *whole* work.

The result is that the proprietor is satisfied, usually more than satisfied; for he realizes that his money has been properly expended, and that he has obtained far more effective work than his neighbor Jones, whose place was "fixed" by Smith the contractor at double the cost. E. W. B.

## NOTES AND CLIPPINGS.

We cut the following Centennial notes from various sources: —

The Main Building. — It was as recently as last May that the work of erecting the columns for the main building was begun; and now the edifice, covering over twenty acres of ground, is nearly completed. Considering the size of the building, its cost has been quite slight. Mr. Dobbins, the contractor, will receive for it $1,600,000.

The State Headquarters are all on State Avenue. Close to the gates of entrance the workmen are erecting a structure for the fire-brigade. Next to this building is the stone mansion of the State of Ohio, built of an excellent quality of Ohio sandstone. Next to this is the Moorish pavilion of Indiana, of which nearly all is finished save the interior arrangements and the decoration. Connecticut has a charming little cottage of what may be termed the half-timber variety of Gothic dwellings. Next comes Massachusetts with a two-story structure, built after the style of the houses that were common in Colonial times, and very quaint looking. The last house upon this avenue is that of the State of New York, which is a bright, pretentious wooden villa, of that variety of which Long Branch boasts so many specimens, and which consists, architecturally, mainly of decorative piazza and ornamented portico and roof. New Jersey is near the women's pavilion. The influence of the British buildings must have been exceedingly strong upon the mind of the architect who designed this house, for it presents to the eye nothing save a congeries of roofs. This was undoubtedly the object of the designer, for these roofs are all covered with tiles made from that excellent fine clay known as Woodbridge blue-ball. Illinois has commenced the erection of a large structure near to that of Indiana. Missouri and Arkansas are putting up commodious structures not far off from the British buildings. The Pennsylvania pavilion will be located near that of Ohio, on Belmont Avenue. The Maryland building will be of wood, with wide, overhanging cornices, and an abundance of ornamental sawed work, turned and carved finials, and panelled, geometric, and flowing tracery, in which there will be introduced shields bearing the monograms of the State, and the dates "1776," "1876." The exterior work of the building will be brilliantly decorated in the colors contained in the shield and coat-of-arms of the State; namely, gold, silver, red, and black. It will cost only seven thousand dollars.

The Swedish Schoolhouse, built of oak, is peculiar in its peaked roof, its low galleries extending around it close to the eaves, its doors studded with bright-headed nails, and metal ornaments at the corners of the windows.

The Egyptians are building a model of the façade of an ancient temple as the entrance portal to their section. The Egyptians mourn the loss of some of their finest architectural specimens, which were found broken, although packed with the greatest care.

The Spanish Building shows no trace of Moorish ideas. It is a stately triple archway in the Roman style, painted in close imitation of red porphyry; and the entablature is ornamented with a row of shields, bearing the coats-of-arms of all the provinces of Spain in all the brilliant colors of heraldry.

Japanese Architecture. — The Japanese are giving the finishing touches to a most extraordinary structure. It is a two-story house, built mainly of cedar, and without a nail or pane of glass in it. The sides may all be opened by shoving back the walls, which are really shutters. A lattice of lath-work covers the lower story, so that the inmates may open all the shutters within, and yet not be exposed to public gaze. A bird is handsomely carved in bas-relief on the wooden panel between the top of the front door and the overhanging porch. The roof is made of dark "tiles," with lighter ones at the angles and borders, and fierce dragons' heads at various important points. The "tiles" are said to be of wood. They have been well varnished if this is the case, and have a lustre not unlike that made by first-class stove polish. This roof is as innocent of nails as the lower part of the building. It is kept in its place by numerous long poles, which lie against its edges, and are kept in place by being lashed together as well as inserted firmly in the ground.

Frame Buildings. — A meeting of citizens of West Philadelphia was held lately for the purpose of protesting against the further erection of frame buildings in the vicinity of the Centennial Grounds.

A Model of the City of Paris is in process of construction on the north side of the lake. It is the work of Col. Lienard Gerama. It will give the topography of that city, the River Seine, the bridges, public buildings, hotels, Arc de Triomphe, Place de la Concorde, Colonne Vendôme, the statuary, the wall, — in fact, a facsimile in miniature of the famed city of gayety, frivolity, and le Jardin Mabile.

Insurance. — There is every prospect that the methods of insurance adopted will give excellent results. This is a department in which a great deal of work and study is required to reach a purely negative end. The blame that would fall on the managers in case of any serious defect would be out of all proportion to the credit which they can gain by the most careful and laborious system of prevention. A thousand would censure in the first case where one would appreciate what had been done in the second. Insurance on the buildings is almost wholly confined to Philadelphia companies.

Accident. — At seven o'clock, March 29, an arch in the addition being constructed at Memorial Hall, Centennial grounds, fell, and eight men were injured. One of them was seriously hurt. The criminal carelessness of a carpenter, who used a bolt already broken in two, was the cause of the accident. The building was not greatly damaged.

The French Restaurant will be largely made up of mirrors, plate-glass, and gilt.

Independence Bell. — It has been decided that Independence Bell shall not be repaired; such repairs being supposed to be destructive of the historic associations that are connected with the manner in which it was cracked.

Independence Hall. — It is proposed that three thousand dollars shall be expended in decorating Independence Hall for the Fourth of July.

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Claim for Extra Pay. — It appearing that, by a special contract made in 1863, Mr. Pellum acted as architect of the building, supervising all the plans and work on the new Court-House, New York, for which he was to receive three per cent commission; his executrix now sues for that percentage on payments for all the work honestly done, less such payments as were made to Mr. Pellum in his lifetime: these claims amount to $190,000. The city contends that losses equal to the amount of these claims were occasioned by the negligent and unskilful manner in which the work was done.

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New York Court-House. — At a meeting of the New York Court-House Commissioners held recently, Leopold Eidlitz was appointed architect of the building. Mr. Eidlitz will report to the commissioners in a week or two upon its condition, when plans will be decided upon for the completion of the work.

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Chicago Custom-House. — Supervising Architect Potter has expressed the fullest satisfaction with the condition of things at the new custom-house. He says that the work is progressing as rapidly as can be expected. The quality of the stone used is, he thinks, much better than that which has been cut previously. There is no danger of a stoppage this summer, as there is enough of the last appropriation remaining to carry on operations.

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Respited. — The Old State House, at the head of State Street, Boston, will be permitted to stand five years longer. The eastern portico, one of few remaining ancient features of the building, will be removed; but the inconvenient chambers will have their accustomed tenants, and the old clock — ornamental, if not always useful and reliable — will still be the subject of dull puns and jokes.

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Wood-Carving. — The Chicagoans are preparing to open a school of instruction in wood-carving.